

FIVE NEW SPECIES OF BRUNELLIA

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BRUNELLIA MOLLIS Cuatr., sp.nov.

Arbor ad 20 m.alta cortice griseo sublaeve. Rami terminales dense tomentelli pilis minutis crispis intricatis adpressisque tecti. Stipulae subulatae 4-5 mm.longae dense tomentosae deciduae.

Folia opposita imparipinnata plerumque 3-jugis. Petiolus 7-10 cm.longus subteres adpresso minuteque tomentosae. Foliola coriacea petiolulata, petiolulo 2-3 mm.longo terminali ad 2 cm.longo; lamina oblongo-elliptica vel lanceolato-elliptica basi obtusissima valde inaequilatera apice paulo angustata acutaque vel obtusiuscula, margine levissime repandoque crenato-serrulata, 7-16 cm.longa 3-6 cm.lata; supra juventute ochraceo-tomentosa denique nervo medio excepto glabra, nervis secundariis leviter notatis reticulo venulorum paulo conspicuo; subtus molliter denseque cinereo-tomentosa pilis minutis tenuissimis crispis adpresso intricatis obiecta, costa crassa eminenti nervis secundariis 9-12 utroque latere prominentibus obtuse ascendentibus prope marginem furcatis ceteris nervis reticulatis plus minusve conspicuis.

Inflorescentiae axillares breviter pedunculatae vel sessiles profuse ramosae ramis ramulisque dense tomentosis pilis tenuibus crispis intricatis et patulis praeditae. Flores viriduli hermaphroditi subsessiles vel breviter pedicellati pedicellis ad 1 mm.longis. Sepala 5 crassiuscula ovato-triangularia 2.5 mm.longa extus tomentosa intus villosa. Stamina 10 filamentis inferiore parte villosis, antheris exsertis ellipticis 1 mm.longis. Carpella plerumque 5 villosa biovulata stylo glabro. Interdum flores hexameri. Folliculi ovoidei apice abrupte apiculati, valvis 5 mm.longis extus tomentulosis et hirtis, monospermi. Semen 3 mm. longum ellipticum rubrum nitidum.

Typus: Colombia, Dep. Huila; Finca Encanto, 30 km. NW of Palermo, 7200 feet alt. Tree 10 m.high 20 cm. DBH. Bark gray, smooth lichen patches. Patch of forest along small stream. Flowers greenish. Common in secondary forest after cutting. Collect. E.L.Little 8797. Holotypus,F.

Id. id. 30 km. NW of Palermo, 7500 feet alt. Tree 20 m.high 25 cm. DBH. Bark gray slightly fissured. Common in wet temperate forest. Collect. E.L.Little 8729. Paratypus,F.

B. mollis is closely related to B. comocladifolia H. & B., from which it is distinguished by the short

tomentum formed by minute curled hairs and not, as in *B. comocladifolia*, by long and straight hairs forming a hirsute and lax pubescence on the nerves and branchlets. In *B. mollis*, the tomentum is dense and adpressed on the branchlets and thicker on the leaves beneath, but never hirsute or villous; besides, this species has larger fruits, more separated nerves on the leaflets, which are larger, more elliptical, very asymmetric at the base and have longer petiolules. The same features separate this species from *B. sibundoyensis* Cuatr., a more tomentose plant with larger leaves and fruits than in *B. comocladifolia*.

BRUNELLIA LITTLEI Cuatr., sp.nov.

Arbor circa 12 met.alta cortice griseo laevi. Rami terminales robusti glaberrimi nodosi lenticellati ultimis internodiis compressis sulcatis.

Folia opposita imparipinnata 14-35 cm.longa, 4-7-juga glabra; stipulis dentiformibus minutis ramum insertis. Petiolus 3-5.5 cm.longus paulo carinatus triquetusque, basi parce incrassatus. Foliola coriacea opposita longe petiolulata, petiolulo 5-8 mm.longo rigido supra sulcato, lamina elliptico-oblonga basi cuneata plerumque asymmetrica apice obtusa vel rotundata vel acutiuscula margine serrulato-crenulata leviter revoluta, 5-12 cm.longa 1.8-4 cm.lata; supra viridi nervo medio filiformi impresso nervis secundariis paucis notatis reticulo subobsoleto; subtus pallida costa bene elevata nervis secundariis tenuibus patulis reticulo venulorum minuto haud elevato; basi petioluli stipellis minutis glandiformibus ad rhachem adnatis.

Inflorescentiae axillares dichasiales sessiles 3-6 cm.longae, ramis angulatis glabris, pedicellis 1-1.5 mm.longis glabris, bracteis lanceolato-linearibus brevissimis. Alabaster mascula rotundata subglabra, 5 sepalis ovatis acutis crassiusculis 3 mm.longis extus glabris intus densissime villosis; staminibus 10, filamentis brevibus antheris oblongis cordatis, carpellis 4. Folliculi 3-4 ovati apiculati compressiusculi 7-8 mm.longi 4 mm.lati pericarpio subcoriaceo extus minute denseque tomentoso et longe strigoso hispido, endocarpio corneo 2-spermo. Semina ovato-oblonga brunneo-rubescens nitida 3 mm.longa.

Typus: Colombia, Dep. Huila; mula trail from La Jironda to El Salado, 15 km. NE of Algeciras, 8000 feet alt. Tree 12 m.high 20 cm.DBH. Bark gray smooth. Clustered fruits. Wet temperate forest. Collect. Elbert L. Little 7506. Holotypus,F.

Colombia, Dep. Huila, from Hacienda Balsillitas (Meta) to El Cedral, alt. 8800 feet. Tree 10 m.high 10 cm. DBH. Bark gray, many small fissures. Common

in wet temperate forest. Collect. Elbert L. Little
8058. Paratype, F.

B. littlei is related to the Cundinamarcan species *B. racemifera* Tul., but it differs from it by its long-petiolulate, narrower leaflets with obsolete secondary nerves and a not prominent reticulation, by its sessile inflorescence formed by glabrous branchlets and ending in very short pedicels, and by its somewhat smaller flowers and fruits. For the same features, except the not prominent nervature, *B. littlei* is also related to the Peruvian *B. ternata* Loes.

BRUNELLIA SUBSESSILIS Killip & Cuatr., sp.nov.

Arbor mediocris ramulis terminalibus compressis sulcatis parce puberulis.

Folia opposita imparipinnata 25-40 cm. longa 8-9-jugis; stipulis minutis villosis. Petiolus robustus subitus carinatus, supra plano sulcatus sicut rhachi sparse puberulus, 5-10 cm. longus. Foliola rigide coriacea opposita breviter petiolulata stipellata, plerumque plicata, petiolulo 1-4 mm. longo puberulo, stipellis patulis supra rhachem insertis dentiformibus acutissimis 1 mm. longis. Lamina lanceolato-elliptica oblonga basi rotundata inaequalis apice attenuata acuta, margine leviter serrato-crenulata, 7-14 cm. longa 3-6 cm. lata; supra viridis glaberrima, costa angusta impressa nervis lateralibus et reticulo venulorum leviter prominulis; subitus breviter tomentello-pubescenti viridi-ochracea, costa prominenti robustaque magis tomentella, nervis secundariis circa 24 utroque latere patulis prominulis praecipue rubescens ad marginem arcuatis anastomosantibusque, reliquis nervulis reticulum minutissimum prominulumque rubescens vel pallidum formantibus.

Inflorescentiae axillares paniculatae breves. Pendunculo robusto brevi ramisque tomentoso-hirsutis. Alabastra glomerata sessilia 6 sepalis extus tomentosis intus glabrescentibus 12 staminibus, 6 carpellis minutis liberis. Fructus breviter pedicellatus vel sessiles pedicello ad 2 mm. longo, pericarpio ovato paulo compresso abrupte acuminato 5 mm. longo, acumine (stylo) 1 mm. longo, dense breviterque tomentoso et strigoso. Semen unicum ovoideum rubescens nitidum circa 2 mm. longum. Sepala persistentia ovato-acuminate 2.5 mm. longa.

Typus: Colombia, Antioquia; Along road from Medellín to Ríonegro 2500 m. alt. Tree 7 m. high. Edge of woods. Collect. E.P. Killip & F.A. Barkley & Bo. Daniel 39885. Holotype, F.

Other specimens: Id. id. Alto de Sabana, collect. Daniel Guarín s.n. (F)

Brunellia subsessilis is close to *B. occidentalis* Cuatr., but differs by its sessile or subsessile, larger and thicker leaflets which usually are strongly folded along the midrib. Besides, the leaflets of the new species are more attenuate towards the apex, the secondary nerves less prominent, and the reticulation is less close than in *B. occidentalis*, in which the leaflets are commonly obtuse and the veins of the reticulation so close that it forms small and deep alveoles. *B. subsessilis* has larger fruits and longer pedicels.

BRUNELLIA ACOSTAE Cuatr., sp.nov.

Arbor ramulis terminalibus paulo compressis puberulis.

Folia opposita imparipinnata in specime trijuga 30-35 cm.longa. Stipulae subulatae circa 4 mm.longae puberulæ. Petiolus 8-9 cm.longus mediocris subteres breviter pubescens basi paulo incrassatus. Foliola opposita longe petiolulata tenuiter coriacea, petiolulo 4-8 mm.longo supra sulcato recto vel flexuoso. Stipellæ supra rhachem insertæ acutissimæ 2 mm. longæ. Lamina elliptico-oblonga sublanceolata basi obtuse attenuata apice angustato-acuminata, margine levissime subobsoleteque crenato-denticulata, 10-14 cm.longa, 3-4.5 cm.lata; supra plumbeo-viridis glabra vel sparsis obsoletis pilis strigosis, costa filiformi impressa strigulosa nervis secundariis parallelis visibilibus ceteribus venuis obsoletis; subtus pallide viridi-ochracea costa crassiuscula eminenti breviter villosula, nervis secundariis angustis prominentibus copiosis 3-7 mm. inter se distantibus subascendentibus (angulo 40°), ad marginem curvatis, minute villosulis; venuis prominentibus in minutum reticulum breviter villosulum anastomosantibus reliqua superficie minutiſſime tomentella.

Inflorescentia subterminalis laxe paniculata folia subatttingens, longe pedunculata, ramis elongatis flexuosis; pedunculo mediocri 9-11 cm.longi ramulisque puberulæ. Pedicelli teneres 1-2 mm.longi sicut alabastra 1.5 mm. diamitentia rubescenti villosulique. Sepala 4 crassiuscula ovata acutiuscula 2 mm.longa 1.3-1.6 mm.lata extus villosula rubescientia intus albi-tomentella. Flores masculi: 8 stamina (4 sepala opposita magis evoluta) filamentis glabris 1 mm.longis antheris fertilibus 0.8 mm.longis ellipticis; 4 carpellis rudimentaribus liberis. Flores feminei: 8 stamina filamentis 0.5 mm.longis antheris 0.6 mm.longis (fertilibus?); 4 carpellis liberis hirsutis biovulatis in stylum flexuosum productis.

Typus: Ecuador; prov. Pichincha, Cord. Occid:

Saloya, km. 50-70 carret. Alt. 1800 m. "pequeño arbolde flores pequeñas. Hojas blanquecinas al envés. Habita asociada a *Cinchona*". Colect. 11-VIII-45 M. Acosta Solís 10955. Holotypus, F.

Brunellia acostae is close to *B. occidentalis* Cuatr. and to *B. subsessilis*, but it differs from both by its leaves with less numerous leaflets which are thinner, larger, acuminate and longer petiolate, with ascending secondary nerves, and less prominent and less dense reticulum on the under side. It differs, furthermore, by its slender flexuose and looser inflorescence, and by its pedicellate, tetramerous flowers.

BRUNELLIA GLABRA Cuatr., sp.nov.

Arbor parva. Ramuli terminales trigoni fusi glabri.

Folia ternata simplicia petiolata rigide coriacea glaberrima. Stipulae minutae dentiformes. Peticulus 1-2 cm. longus robustus supra sulcatus basi paulo incrassatus ampliatusque. Lamina oblongo-lanceolata basi longe attenuata supra petiolum anguste decurrentis apicem versus angustata acuta, margine serrato-crenulata, 11-18 cm. longa 3-6 cm. lata; supra viridis nitida costa impressa nervis secundariis filiformibus depresso-s reliquis nervulis obsoletis; subtus costa crassa eminentique nervis secundariis 11-12 utroque latere valde eminentibus in angulo acuto ascendentibus prope marginem furcatis anastomosantibusque, nervulis venulisque in reticulum minutum bene conspicuum anastomosantibus.

Inflorescentiae cymoso-paniculatae longe pedunculatae, pedunculo robusto sicut ramulis glaberrimo. Flores masculi breviter pedicellati, pedicello crasso 1-2 mm. longo glabro in receptaculum incrassato. Calyx 6 sepalis crassulis ovato-oblongis acutis 4 mm. longis (supra receptaculum), intus dense villosis extus subglabris (sparsissime puberulis). Stamina 12, filamenti basi hirsutulis, antheris crassis ellipticis 1.5 mm. longis 1 mm. latis. Carpellis 6 liberis stylis elongatis glabris ovaris hirsutis sterilibus. Discus crassus tomentoso-hirsutus.

Typus: Colombia, Dep. Cauca; Cordillera Occidental: Monte El Trueno, 2700-3000 m. alt., paramillo, collect. F. W. Pennell 7515. Holotypus, F.

B. glabra is characterized by its being completely glabrous. Its closest species is *B. ovalifolia* H. & B. from Ecuador, which has ovate, obtuse leaves, pubescent on the under side, and pentamerous flowers with 4 or 5 carpels. Besides, in the Ecuadorian plant the sepals are larger, narrower, and villous outside, the branchlets and the longer pedicels pubescent.